

Application No.: 10/024,143
Amdt. Dated: November 10, 2005
Reply to Office Action Dated: September 12, 2005

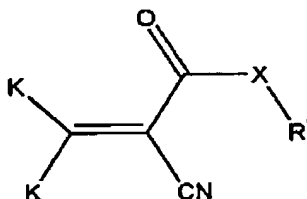
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original): A composition comprising a chemical moiety comprising the structure:



wherein:

K is H;

X is O, NR, S or Se;

R is absent, -H, -(CH₂)_nalkyl, -(CH₂)_nalkenyl, -(CH₂)_nalkynyl, -(CH₂)_ncycloalkyl, -(CH₂)_n heterocyclyl, -(CH₂)_naryl or -(CH₂)_nheteroaryl;

n is an integer from 0 to 10;

R' is a substituted organic residue; and

[R'-X] comprises at least one member selected from the group consisting of amino acid residues, payloads and branched polyfunctional groups.

Claims 2-3 (Cancelled).

Claim 4 (Original): The composition of claim 1, wherein R'-X is an amino acid residue.

Claim 5 (Original): The composition of claim 1, wherein R'-X is a residue of an amino acid selected from the group consisting of glycine, alanine, valine, cysteine, leucine, isoleucine, serine, threonine, methionine, glutamic acid, aspartic acid, glutamine, asparagine, lysine, arginine, proline, histidine, phenylalanine, tyrosine and tryptophan.

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Claim 6 (Original): The composition of claim 4, wherein said residue is of an amino acid selected from the group consisting of glycine, alanine, valine, cysteine, leucine, isoleucine, serine, threonine, methionine, glutamic acid, aspartic acid, glutamine, asparagine, lysine, arginine, proline, histidine, phenylalanine, tyrosine, tryptophan, and an analog, derivative or congener of any of the foregoing.

Claim 7 (Original): The composition of claim 5, wherein said amino acid is an (L) stereoisomer.

Claim 8 (Original): The composition of claim 1, wherein R'-X comprises a payload.

Claim 9 (Original): The composition of claim 1, wherein R'-X comprises a therapeutic agent.

Claim 10 (Original): The composition of claim 9, wherein said therapeutic agent comprises a vaccine.

Claim 11 (Original): The composition of claim 9, wherein said therapeutic agent comprises at least one member selected from the group consisting of analgesics; antiasthmatics; anticonvulsants; antidepressants; antiemetics; antigens and antibodies thereto; antihistamines; antihypertensive agents; antinauseants; anti-Parkinson agents; antispasmodics; apoproteins, bronchodilators; beta-blockers; chemotherapeutic agents; cardiovascular agents; central nervous system agents; coenzymes; decongestants; diuretics; enzymes; enzyme inhibitors; expectorants; glycoproteins; H-2 antagonists; haptens and antibodies thereto; hormones, lipids, liposomes; mucolytics; muscle relaxants; protein analogs in which at least one non-peptide linkage replaces a peptide linkage; phospholipids; prostaglandins; receptors and other membrane proteins; retro-inverso oligopeptides; stimulants; toxins; tranquilizers; and vitamins and mineral and nutritional additives.

Claim 12 (Original): The composition of claim 9, wherein said therapeutic agent comprises at least one member selected from the group consisting of antibiotics, antimicrobials, antiseptics, bacteriocins, bacteriostats, disinfectants, steroids, anesthetics,

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antifungal agents, antiinflammatory agents, antibacterial agents, antiviral agents, antitumor agents, growth promoting substances, and antioxidants.

Claim 13 (Original): The composition of claim 1, wherein R'-X comprises an imaging agent.

Claim 14 (Original): The composition of claim 13, wherein said imaging agent comprises at least one moiety selected from the group consisting of radionuclides, atoms with unpaired spin electrons, free radicals and contrast agents.

Claim 15 (Original): The composition of claim 13, wherein said imaging agent is detectable through its emission of light, radioactivity or chemical signals.

Claim 16 (Original): The composition of claim 13, wherein said imaging agent is detectable through absorbing or reflecting radiation.

Claim 17 (Original): The composition of claim 1, wherein R'-X comprises a targeting moiety.

Claim 18 (Original): The composition of claim 17, wherein said targeting moiety comprises at least one member selected from the group consisting of lipids, antibodies, lectins, ligands, sugars, steroids, hormones, nutrients and proteins.

Claim 19 (Original): The composition of claim 17, wherein said targeting moiety comprises an internalizing polypeptide sequence.

Claim 20 (Original): The composition of claim 17, wherein said targeting moiety comprises at least one molecule selected from the group consisting of biotin, folates, riboflavin, carnitine, inositol, lipoic acid, niacin, pantothenic acid, thiamin, pyridoxal, ascorbic acid, lipid soluble vitamins A, D, E and K, steroidal lipids and steroidal hormones

Claim 21 (Original): The composition of claim 17, wherein said targeting moiety comprises an antibody or an antisense oligonucleotide.

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Claim 22 (Original): The composition of claim 17, wherein said targeting moiety is elected from the group consisting of antigens, antisense oligonucleotides, antibodies, lectin, receptor ligands and sugars.

Claims 23-151 (Cancelled).